
1. IDENTIFICATION

Product Name 16% Formaldehyde, Methanol Free
Recommended use of the chemical and restrictions on use
Identified Uses For Research and Development Use Only
Company Identification Covaris, Inc.
Customer Information Number 14 Gill Street, Unit H
Woburn, MA 01801
(781) 932-3959
Emergency Telephone Number
Chemtrec Number (800) 424-9300 (for emergencies only)
Issue Date March 14, 2014
Supersedes Date

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification

Acute Toxicity (oral) - Category 4
Acute Toxicity (dermal) - Category 4
Acute Toxicity (inhalation - vapor) - Category 4
Carcinogenicity - Category 1A
Flammable Liquids - Category 4
Skin corrosion/irritation - Category 2
Serious eye damage/eye irritation - Category 2A
Skin sensitizer - Category 1
Specific Target Organ Toxicity Single Exposure - Category 3

Label Elements

Hazard Symbols



Signal Word: Danger

Hazard Statements

Combustible liquid.
Causes serious eye irritation.
Causes skin irritation.
Harmful if inhaled.
Harmful if swallowed.
Harmful in contact with skin.
May cause an allergic skin reaction.
May cause cancer.
May cause respiratory irritation.

2. HAZARD IDENTIFICATION

Precautionary Statements**Prevention**

Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Keep away from flames and hot surfaces.
Do not handle until all safety precautions have been read and understood.
Wash hands thoroughly after handling.
Avoid breathing gas/mist/vapors/spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.

Response

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical advice/attention.
If inhaled: Remove to fresh air and keep comfortable for breathing.
Take off contaminated clothing and wash before re-use.
If exposed or concerned: Get medical attention/advice.
If on skin: Wash with plenty of soap and water.
Rinse mouth.
If skin irritation or rash occurs, get medical advice/attention.
In case of fire: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Call a poison center/doctor if you feel unwell.

Storage

Store locked up.
Store closed in well-ventilated place. Keep container tightly closed. Keep cool.

Disposal

Dispose of contents/container in accordance with local regulation.

Other Hazards

None

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	0%
Acute dermal toxicity	0%
Acute inhalation toxicity	0%
Acute aquatic toxicity	10-20%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration
Water	7732-18-5	84%
Formaldehyde	50-00-0	16%

4. FIRST- AID MEASURES

Description of necessary first-aid measures**Eyes**

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash affected area with plenty of water. Seek medical attention if symptoms persist.

Ingestion

Do not induce vomiting. Have victim drink 1-3 glasses of water to dilute stomach contents. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing. Obtain medical attention immediately.

Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed

Aside from the information found under description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed**Notes to Physicians**

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable (and unsuitable) Extinguishing Media

Use foam, dry chemical or carbon dioxide. Use water spray for surroundings and containers. Be aware of the possibility of re-ignition

Specific hazards arising from the chemical

Vapors can travel a considerable distance to a source of ignition and flashback. Flashback can occur if air temperature exceeds flash point. Be aware of possibility of re-ignition.

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing.

Environmental Precautions

Prevent the material from entering drains or watercourses.

Methods and materials for containment and cleaning up

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Eliminate all sources of ignition.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective equipment when handling. Do not eat or drink while handling this material.

Conditions for safe storage

Store at room temperature away from heat and direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Formaldehyde

ACGIH: 0.3 ppm ceiling exposure limit

OSHA: 0.75 ppm TWA

2 ppm STEL

0.5 ppm Action Level

Appropriate engineering controls

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions. Use only with adequate ventilation.

Individual protection measures**Respiratory Protection**

Wear respiratory protection if there is a risk of exposure to high vapor concentrations or aerosols. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Skin Protection

Chemical resistant gloves

Eye/Face Protection

Chemical goggles or safety glasses with side shields

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State	Liquid
Color	Clear
Odor	Characteristic
Odor Threshold	No data available
pH	No data available
Density	1.08 – 1.3
Boiling Range/Point (°C/F)	>93.33/200
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C/F)	62/143.6 (closed cup)
Vapor Pressure	2.3 – 2.7 kPa (17 - 20 mm Hg) room temperature
Evaporation Rate (BuAc=1)	>1
Solubility in Water	Soluble
Vapor Density (Air = 1)	1
VOC (g/l)	No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	3%
Lower explosive limit	7%
Flammability (solid, gas)	Not applicable

10. STABILITY AND REACTIVITY

Reactivity

No known reactivity.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Heat, sparks, flames - high temperatures - sources of ignition

Incompatible Materials

Oxidizing agents

Hazardous Decomposition Products

Oxides of carbon

11. TOXICOLOGICAL INFORMATION

Acute ToxicityFormaldehyde

LD 50 Oral (rat) 800 mg/kg

LD 50 Dermal >200 and ≤ 1000 mg/kg (based on ECHA classification of Category 3)

LC50 Inhalation >2.0 and ≤ 10.0 mg/l (based on ECHA classification of Category 3)

Specific Target Organ Toxicity (STOT) – single exposure

Formaldehyde: Available information indicates this ingredient may cause respiratory irritation.

Specific Target Organ Toxicity (STOT) – repeat exposure

Available data indicates this product is not expected to cause target organ effects after repeated exposure.

Serious Eye damage/Irritation

Available data indicates this product causes serious eye irritation.

Skin Corrosion/Irritation

Available data indicates this product causes skin irritation.

11. TOXICOLOGICAL INFORMATION

Respiratory or Skin Sensitization

Formaldehyde: May cause an allergic skin reaction.

Formaldehyde: Available data indicates this ingredient is not expected to cause respiratory sensitization.

Carcinogenicity

Formaldehyde: IARC Group 1: Carcinogenic to humans

NTP: Known human carcinogen

OSHA: Potential cancer hazard.

Germ Cell Mutagenicity

Available data indicates this product is is not expected to be mutagenic.

Reproductive Toxicity

Available data indicates this product is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No relevant studies identified.

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

IATA

Proper Shipping Name Aviation Regulated Liquids, n.o.s.(Formaldehyde)

Hazard Class 9

Subsidiary class None

Packing group None

UN-No UN3334

Environmental hazards No

15. REGULATORY INFORMATION

United States TSCA Inventory

All components of this product are in compliance with the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

15. REGULATORY INFORMATION

Canada DSL Inventory

All components of this product are listed on the Domestic Substance List (DSL).

WHMIS Classification

B3.D2A.D2B

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

SARA Title III Sect. 311/312 Categorization

Fire hazard, Immediate (Acute), Delayed (Chronic)

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Flammability - 2

NFPA Code for Health - 2

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Flammability - 2

HMIS Code for Health - *2

HMIS Code for Physical Hazard - 0

HMIS Code for Personal Protection - See Section 8

*Chronic

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service ECHA: European Chemicals Agency

IARC: International Agency for Research on Cancer

N/A: Denotes no applicable information found or available

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

SDS: Safety Data Sheet

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

Information Source and References

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

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